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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,659	02/18/2004	Marquis D. Doyle	030272	5215

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 QUALCOMM INCORPORATED
 5775 MOREHOUSE DR.
 SAN DIEGO, CA 92121

EXAMINER

BEHNCKE, CHRISTINE M

ART UNIT	PAPER NUMBER
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3661

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/09/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/09/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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 kscanla@qualcomm.com
 nanm@qualcomm.com

Office Action Summary

Application No.

10/782,659

Applicant(s)

DOYLE ET AL.

Examiner

Christine M. Behncke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the application filed 18 February 2004, in which claims 1-29 were presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 6, 9-12, 15, 18-21, 24, and 27-29 are rejected under 35

U.S.C. 102(e) as being anticipated by Zur et al., US 6,646,561.

(Claims 1, 10, 19, and 28) Zur et al. discloses a method, apparatus, and computer-readable media comprising instructions for determining a potential failure of a battery in a vehicle, the apparatus comprising: logic to receive a battery signal during a vehicle starting event (column 6, lines 57-62); detection logic that operates to determine one or more battery characteristics from the battery signal (column 14, lines 40-46), and wherein the detection logic further comprises logic to compare the battery characteristics to reference parameters derived from one or more prior starting events to determine whether the battery poses a potential risk of failure (column 14, lines 47-63, column 18, line 52-column 19, line 25, and column 38, lines 22-41); and logic to

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activate one or more vehicle alert indicators if a selected battery characteristic exceeds a selected reference parameter (column 17, lines 31-55).

(Claims 2, 11, and 20) Zur et al. further discloses logic to create a battery waveform from the battery signal and evaluate the battery waveform to determine the battery characteristics (column 13, lines 46-65).

(Claims 3, 12, and 21) Zur et al. further discloses wherein the battery characteristics comprise one or more of a battery dip voltage, engine speed indicator, and engine starting time indicator (column 14, lines 40-46).

(Claims 6, 15, and 24) Zur et al. further discloses logic to select the reference parameters from a table of parameters based on one or more selection criteria, wherein the selection criteria comprise engine temperature, ambient temperature, battery type, and vehicle type (column 14, line 57-column 15, line 20).

(Claims 9, 18, 27, and 29) Zur et al. further discloses logic to compare the battery characteristics to the stored reference parameters to determine a potential vehicle component failure (column 14, lines 40-46, and column 1, line 64-column 2, line 28).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 13, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zur et al.

Zur et al. comprises logic to compare the battery characteristics to reference parameters to determine a potential fault. Zur et al. does not disclose that the reference parameters are determined by averaging prior battery characteristics from one or more prior starting events. However, it would have been obvious to one of ordinary skill at the time of the invention to use a reference parameter that reflects an average of the battery characteristics from prior starting events as, supposedly, these prior starting events would reflect a battery characteristic that is considered to be a normal value of the fully functional battery. It would be obvious and to the choice of one of ordinary skill to use a set value to indicate the acceptable working condition of the battery or an averaged value that also indicates acceptable working condition of the battery.

Claim Rejections - 35 USC § 103

4. **Claims 5, 7, 8, 14, 16, 17, 23, 25 and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Zur et al. in view of McLeod et al., US 2006/0052918.

Zur et al. discloses using wireless means to transmit the alarm to an indicator to notify the operator of a potential failure of the battery. Zur et al. does not disclose transmitting the alarm or the battery characteristics to a remote station. However, McLeod et al. teaches a control and diagnostic system wherein the battery characteristics of a plurality of vehicles is monitored and transmitted to a remote station ([0045], [0038]). Further McLeod et al. teaches transmitting a battery alarm alert indicator to a remote station if a battery characteristic exceeds a selected reference

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parameter ([0045]). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Zur et al. with the teachings of McLeod et al. because as McLeod et al. suggests, it is critical for proper maintenance for the battery characteristics, recharge scheduling, etc. to monitor the conditions of the vehicle batteries, and for a use with a fleet of vehicles individual manual diagnostics is too time consuming. McLeod suggests it would have been obvious to one of ordinary skill in the art to increase the efficiency and cost-effectiveness of monitoring a fleet of vehicles, to transmit the parameters and/or alarms to a remote station where scheduling of maintenance can be centralized. Neither reference explicitly discloses downloading reference parameters from a remote station to the diagnostic device. However, it would have been obvious to one of ordinary skill in view of the teachings of McLeod et al. including a bi-directional communication between a remote station and the on-board vehicle diagnostic device to download reference parameters to the vehicle rather than manually entering the reference parameters. This was well known in the art to allow for updates in computer software.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine M. Behncke whose telephone number is (571) 272-8103. The examiner can normally be reached on 8:30 am- 5pm.

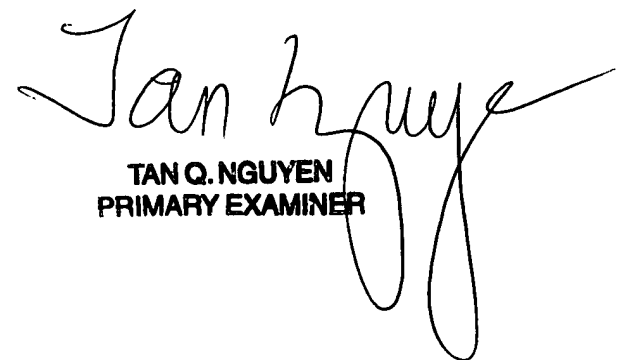
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (571) 272-6956. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CMB



TAN Q. NGUYEN
PRIMARY EXAMINER